REMARKS

Applicants acknowledge receipt of the Office Action mailed June 11, 2010.

In the Office Action, the Examiner rejected claims 31-34, 38-45, 49-51, 53-65, and 68 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* (GB 1,091,507) in view of *Okamoto* (U.S. Patent No. 5,287,691); rejected claims 31-37, 39-48, 50, 51, and 53-65 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Mizuma* (JP Patent No. 11-241282); and rejected claims 31, 41, and 52 under 35 U.S.C. § 103(a) as being unpatentable over *Io* (JP Patent No. 06-024216) in view of *Okamoto.*

In this Amendment, Applicants amend claims 31 and 41, cancel claims 50, 52, and 53, without prejudice or disclaimer, and add new claims 69-71. Upon entry of this Amendment, claims 31-49, 51, 54-65, and 68-71 are pending. Of these claims, claims 31, 69, and 70 are independent.

The originally-filed specification, claims, abstract, and drawings fully support the amendments to claims 31 and 41, and the addition of new claims 69-71. No new matter has been introduced.

Based on the foregoing amendments, Applicants traverse the rejections above and respectfully request reconsideration for at least the reasons that follow.

I. 35 U.S.C. § 103(a) REJECTIONS

Applicants traverse the rejection of claims 31-34, 38-45, 49-51, 53-65, and 68 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Okamoto.* Applicants respectfully disagree with the Examiner's arguments and conclusions and submit that amended independent claim 31 patentably distinguishes

over *Pneumatiques* and *Okamoto* at least for the reasons described below. Applicants further submit that the rejection of claims 50 and 53 has been rendered moot by the cancellation of those claims.

The key to supporting any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. *See* M.P.E.P. § 2142, 8th Ed., Rev. 7 (July 2008). Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. *See* id. "A conclusion of obviousness requires that the reference(s) relied upon be enabling in that it put the public in possession of the claimed invention." M.P.E.P. § 2145. Furthermore, "[t]he mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" at the time the invention was made. M.P.E.P. § 2143.01(III), internal citation omitted. Moreover, "[i]n determining the differences between the prior art and the claims, the question under 35 U.S.C. § 103 is not whether the differences themselves would have been obvious, but whether the claimed invention as a whole would have been obvious." M.P.E.P. § 2141.02(I), internal citations omitted (emphasis in original).

"[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art." M.P.E.P. § 2141(II). "Office personnel must explain why the difference(s) between the

prior art and the claimed invention would have been obvious to one of ordinary skill in the art." M.P.E.P. § 2141(III).

Amended independent claim 31 recites a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply."

Pneumatiques discloses that "[t]he present invention is especially suitable for giant tyres such as truck tyres." (*Pneumatiques*, p. 1, ll. 40-41). *Pneumatiques* further appears to disclose a pneumatic tire including a bead with a single inextensible reinforcing bead wire 10 surmounted by a rubber filler 11, the assembly being partially enclosed by a flipper 12 constituted by parallel cords, cables or wires, preferably metal wires, embedded in a calendered layer of rubber mixture. (*Id.* at p. 2, ll. 35-41). In the bead region, the carcass plies are divided into two equal or unequal groups, one of which, group 13, extends down the axially inner side of the filler 11 and is turned up outwardly about the wire 10 and back on itself along the axially outer side of the flipper 12. The other group of plies, group 14, extends radially inwardly in contact with stepped edges of the plies 13 and extends to the toe 15 of the bead. Located on the outside of the external group 14 of carcass plies are two flat stiffening strips 16. (*Id.* at p. 2, ll. 47-64).

As admitted by the Examiner, "Pneumatiques fails to expressly suggest a cord having at least one preformed element." (*Office Action*, p. 2, para. 3, ll. 10-11). *Pneumatiques* also fails to teach or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

The Examiner asserts that "the tire of Pneumatiques includes a pair of chafers 16 formed of metallic reinforcing elements." (*Office Action*, p. 3, ll. 20-21). The stiffening strips 16, which the Examiner equates to the claimed "chafer," however, are not disposed between the flipper 12 and carcass plies 13. Rather, *Pneumatiques* discloses that "[l]ocated on the outside of the external group 14 of carcass plies are two flat stiffening strips 16" (emphasis added).

In order to cure the deficiencies of *Pneumatiques*, the Examiner relies on *Okamoto* and alleges "a metallic cord is recognized as providing improved corrosion resistance and fatigue resistance, as shown for example by Okamoto . . . Okamoto broadly teaches the use of such a metallic cord in tire constructions." (*Office Action*, p. 2, para. 3, line 11 - p. 3, line 3).

Okamoto, for example, appears to disclose a metal cord formed by twisting two spirally pre-shaped metal filaments together with a twisting pitch P. The metal filament has not only the spiral shape formed by twisting, but retains so much of its spiral preshape as to have a pitch p equal to 0.20-0.50 times the twisting pitch and a diametric height h of 0.05-0.25 mm. (*Okamoto*, Abstract). Such teaching, even if present in *Okamoto*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

As explained above, the elements of independent claim 31 are neither taught nor suggested by the cited references. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the

differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 31. Claim 31, and claims 32-34, 38-45, 49, 51, 54-65, and 68 which depend from claim 31, are patentable over *Pneumatiques* and *Okamoto*. Applicants therefore request that the rejection of claims 31-34, 38-45, 49-51, 53-65, and 68 under 35 U.S.C. § 103(a) be withdrawn.

Applicants traverse the rejection of claims 31-37, 39-48, 50, 51, and 53-65 under 35 U.S.C. § 103(a) as being unpatentable over *Pneumatiques* in view of *Mizuma*. Applicants respectfully disagree with the Examiner's arguments and conclusions and submit that amended independent claim 31 patentably distinguishes over *Pneumatiques* and *Mizuma* at least for the reasons described below. Applicants further submit that the rejection of claims 50 and 53 has been rendered moot by the cancellation of those claims.

Amended independent claim 31 recites a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply."

As discussed above, *Pneumatiques* discloses that "[t]he present invention is especially suitable for giant tyres such as truck tyres." (*Pneumatiques*, p. 1, ll. 40-41). *Pneumatiques* further appears to disclose a pneumatic tire including a bead with a single inextensible reinforcing bead wire 10 surmounted by a rubber filler 11, the assembly being partially enclosed by a flipper 12 constituted by parallel cords, cables or

wires, preferably metal wires, embedded in a calendered layer of rubber mixture. (*Id.* at p. 2, ll. 35-41). In the bead region, the carcass plies are divided into two equal or unequal groups, one of which, group 13, extends down the axially inner side of the filler 11 and is turned up outwardly about the wire 10 and back on itself along the axially outer side of the flipper 12. The other group of plies, group 14, extends radially inwardly in contact with stepped edges of the plies 13 and extends to the toe 15 of the bead. Located on the outside of the external group 14 of carcass plies are two flat stiffening strips 16. (*Id.* at p. 2, ll. 47-64).

As admitted by the Examiner, "Pneumatiques fails to expressly suggest a cord having at least one preformed element." (*Office Action*, p. 5, para. 4, ll. 10-11). *Pneumatiques* also fails to teach or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

As discussed above, the stiffening strips 16 in *Pneumatiques*, which the Examiner equates to the claimed "chafer," are not disposed between the flipper 12 and carcass plies 13. Rather, *Pneumatiques* discloses that "[l]ocated on the outside of the external group 14 of carcass plies are two flat stiffening strips 16" (emphasis added).

In order to cure the deficiencies of *Pneumatiques*, the Examiner relies on *Mizuma* and alleges "a metallic cord is recognized as providing high durability, as shown for example by Mizuma . . . Mizuma broadly teaches the use of such a metallic cord in tire constructions." (*Office Action*, p. 5, para. 4, ll. 11-13).

Mizuma, for example, discloses a steel cord including a single wire or twisted wires, which preferably comprise flat high tension steel wires having a carbon content of

0.07-1.00 wt.%. At least one of the wires does not have a straight line portion on a flat surface and only includes smooth, continuous curved portions, and is shaped in a two-dimensional wave form having a wave pitch of 2-10 mm and a wave height of 0.02-10 mm. The steel cords are embedded in a rubber molded product in the form of belt plies or carcass plies in steel radial tires. (*Mizuma*, Abstract). Such teaching, even if present in *Mizuma*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

As explained above, the elements of independent claim 31 are neither taught nor suggested by the cited references. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 31. Claim 31, and claims 32-37, 39-48, 51, and 54-65 which depend from claim 31, are patentable over *Pneumatiques* in view of *Mizuma*. Applicants therefore request that the rejection of claims 31-37, 39-48, 50, 51, and 53-65 under 35 U.S.C. § 103(a) be withdrawn.

Applicants traverse the rejection of claims 31, 41, and 52 under 35 U.S.C. § 103(a) as being unpatentable over *Io* in view of *Okamoto*. Applicants respectfully disagree with the Examiner's arguments and conclusions and submit thát amended

independent claim 31 patentably distinguishes over *Io* and *Okamoto* at least for the reasons described below. Applicants further submit that the rejection of claim 52 has been rendered moot by the cancellation of that claim.

Amended independent claim 31 recites a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply."

Io appears to disclose a heavy duty radial tire with enhanced bead durability and without enlargement of the bead apex rubber thickness. The value J1/I1+J1 ranges from 45-50%, wherein I1 represents the bead apex rubber thickness at the winding end of a steel ply and J1 represents the dimension from the edge of the steel ply to the curving surface on the outside of the side wall. (*Io*, Abstract).

As admitted by the Examiner, "Io fails to expressly suggest a cord having at least one preformed element." (*Office Action*, p. 8, para. 5, ll. 6-7). *Io* also fails to teach or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

Io relates to heavy duty tires. Further, the Examiner alleges that "Io is directed to a pneumatic tire construction comprising a chafer 3 and a flipper that is spaced from a carcass structure by said chafer." (*Office Action*, p. 8, para. 5, ll. 2-4). *Io*, however, fails to disclose that the alleged chafer 3 is disposed between the alleged flipper and a carcass ply.

In order to cure the deficiencies of *Io*, the Examiner relies on *Okamoto* and alleges "a metallic cord is recognized as providing improved corrosion resistance and

fatigue resistance . . . Okamoto broadly teaches the use of such a metallic cord in tire constructions." (*Office Action*, p. 8, para. 5, ll. 7-10).

As discussed above, *Okamoto*, for example, appears to disclose a metal cord formed by twisting two spirally pre-shaped metal filaments together with a twisting pitch P. The metal filament has not only the spiral shape formed by twisting, but retains so much of its spiral preshape as to have a pitch p equal to 0.20-0.50 times the twisting pitch and a diametric height h of 0.05-0.25 mm. (*Okamoto*, Abstract). Such teaching, even if present in *Okamoto*, which Applicants do not necessarily concede, however, does not constitute or suggest at least a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the at least one flipper and the at least one carcass ply," as recited in amended independent claim 31 (emphasis added).

As explained above, the elements of independent claim 31 are neither taught nor suggested by the cited references. Consequently, the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the prior art and the claim. Accordingly, no reason has been clearly articulated as to why the claim would have been obvious to one of ordinary skill in view of the prior art. Therefore, a *prima facie* case of obviousness has not been established for independent claim 31. Claim 31, and claim 41 which depends from claim 31, are patentable over *Io* in view of *Okamoto*. Applicants therefore request that the rejection of claims 31, 41, and 52 under 35 U.S.C. § 103(a) be withdrawn.

II. NEW CLAIMS

New independent claims 69 and 70, though of different scope from independent claim 31, recite limitations similar to those set forth above with respect to independent

claim 31. Specifically, independent claim 69 recites in pertinent part a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed axially internal with respect to the at least one carcass ply"; and independent claim 70 recites in pertinent part a pneumatic tyre, comprising: "a chafer; . . . wherein the chafer is disposed between the two carcass plies." Claims 69 and 70 are therefore allowable for at least the reasons presented above.

Further, new claim 71 depends from independent claim 31 and is allowable at least for the same reasons independent claim 31 is allowable. In addition, the dependent claim recites unique combinations that are neither taught nor suggested by the cited art, and therefore is also separately patentable.

III. CONCLUSION

Applicants respectfully submit that claims 31-49, 51, 54-65, and 68-71 are in condition for allowance.

The Office Action contains characterizations of the claims and the related art with which Applicants do not necessarily agree. Unless expressly noted otherwise, Applicants decline to subscribe to any statement or characterization in the Office Action.

In view of the foregoing, Applicants respectfully request reconsideration and reexamination of this application, and the timely allowance of the pending claims.

If there is any fee due in connection with the filing of this Amendment, please charge the fee to Deposit Account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, L.L.P.

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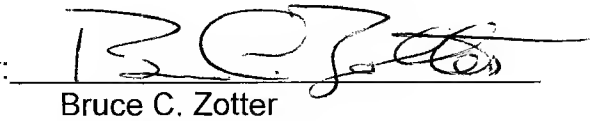
By: 
Bruce C. Zotter
Reg. No. 27,680